Auto Scaling

Getting Started

Product Documentation

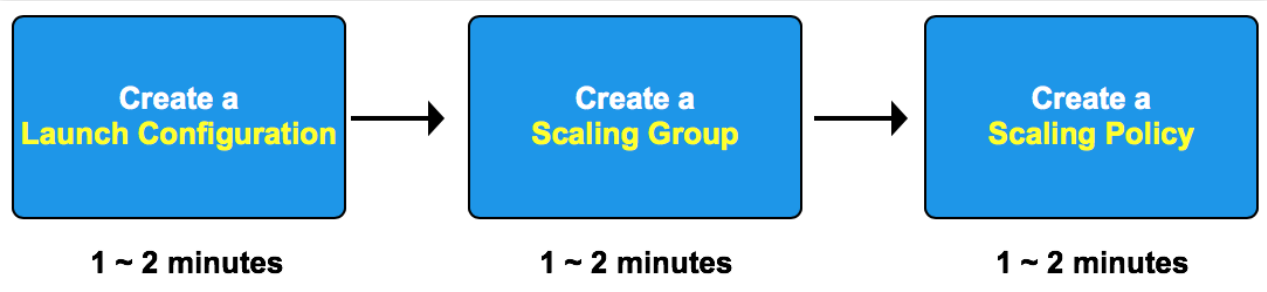
Contents

Getting Started
Creating a Scaling Plan in 5 Minutes

Last updated：2024-01-08 17:53:29

Feature Overview

This document describes how to create a complete AS scheme in three steps.



Note:
This document describes how to create a scheme in the AS console. If you prefer to use APIs, follow the instructions in Introduction.

Directions

Create a complete AS scheme as instructed in the following documents:
Step 1: Creating a Launch Configuration
Step 2: Creating a Scaling Group
Step 3: Creating a Scaling Policy

Step 1:Creating a Launch Configuration

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Overview

A launch configuration defines the configuration information of CVM instances used for auto scaling, including their images, storage, networks, security groups, login methods, and other configuration information.

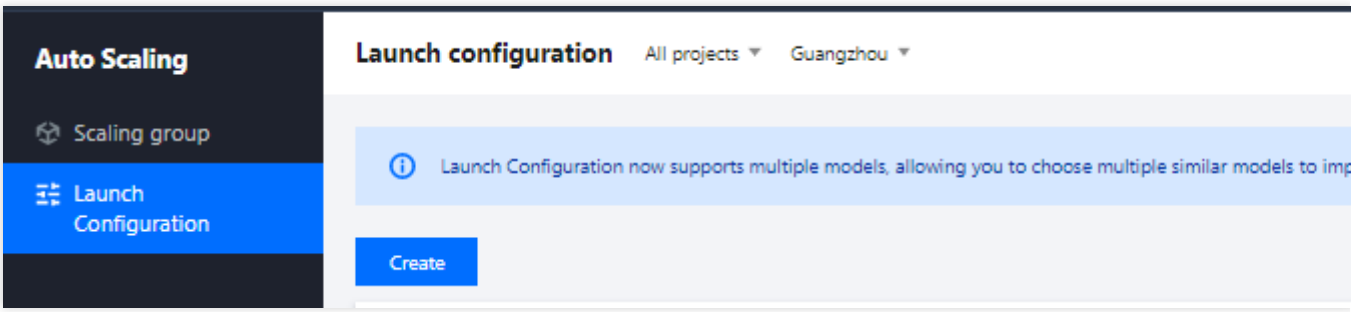
Note:

Creating a launch configuration is **free of charge**.

Directions

Selecting a region

1. Log in to the Auto Scaling console and click **Launch Configuration** in the left sidebar.
2. At the top of the **Launch configuration** page, select the project and region of the launch configuration.

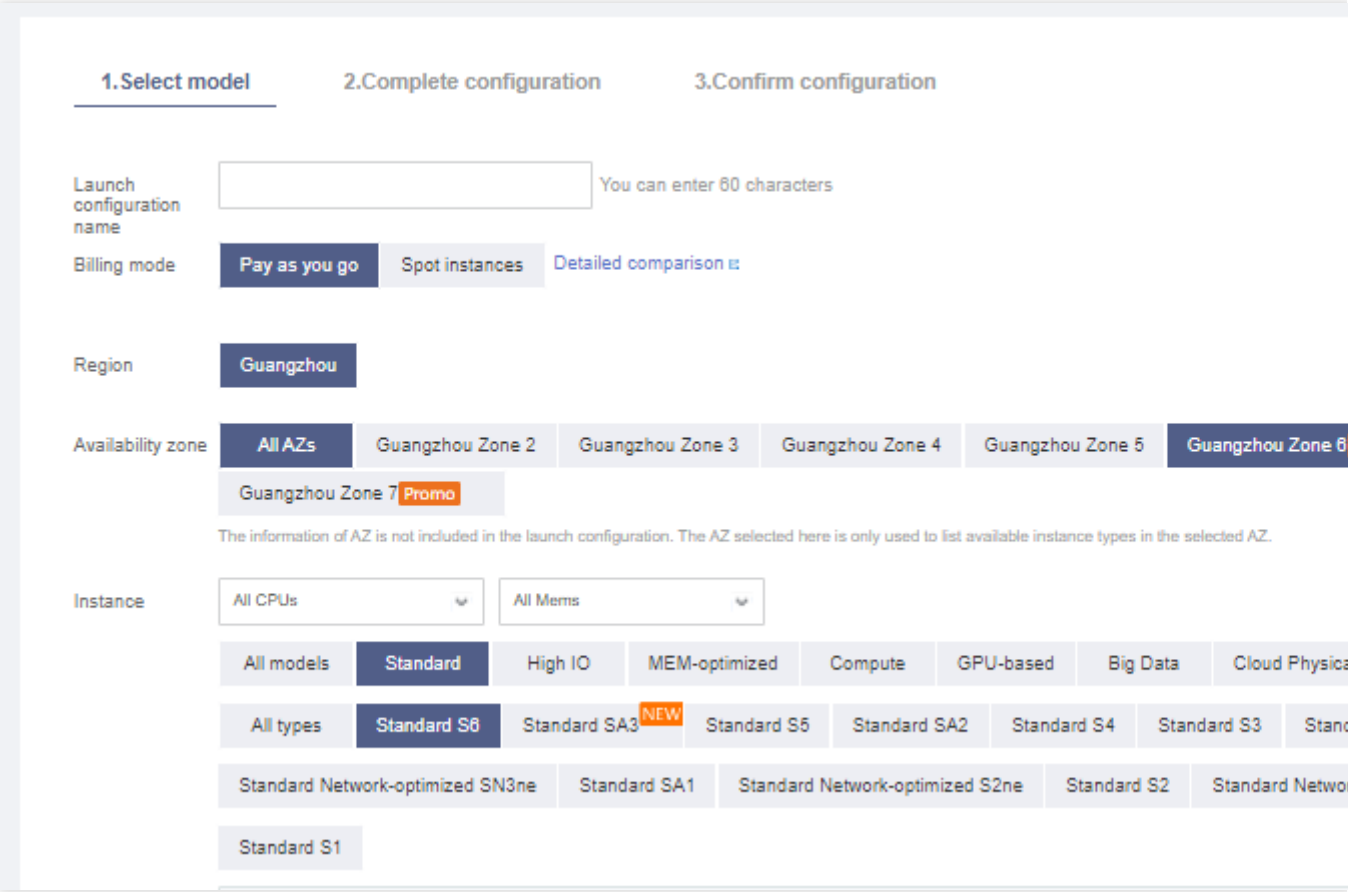


CVM instances and CLB instances must be in the same region as the one specified for launch configuration. For example, if the Guangzhou region is specified for the launch configuration, only CVM instances in Guangzhou will be automatically added to the scaling group. For a scaling group in Guangzhou, you cannot add CVM instances or bind CLB instances from other regions (such as Shanghai, Beijing, Hong Kong (China), or Toronto).

3. Click **Create** to go to the **Create a launch configuration** page.

Selecting a model

Set up the launch configuration name, availability zone, and model.



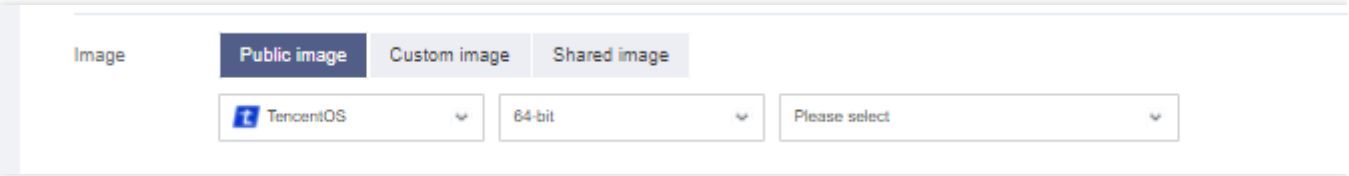
Launch configuration name: Set the name of the launch configuration.

Billing mode: Support **Pay As You Go** and **Spot Instance**.

Availability zone, model: Select the model of the instance to be bound with the scaling group.

Selecting images, storage, and bandwidth

1. When creating a launch configuration, you can use a public image, custom image or shared image. For more information, see Image Overview.



We recommend that you use a custom image where the application environment has already been deployed for the following reasons:

If you select a **public image**, the CVM instances created in a scaling group will have an operating system without the application environment. Then, you need to manually deploy the application environment.

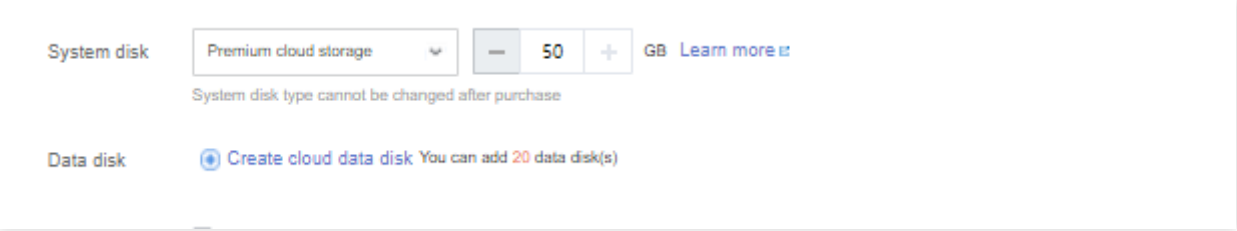
If you select a **custom image**, you can use the image created for a CVM instance with an environment that has been deployed to batch create CVM instances have the same software environment as the original CVM, so as to

implement batch deployment.

Note:

For more information about creating images for CVM instance to be bound to a scaling group, see Creating a Custom Image.

2. Set the disks in the launch configuration.



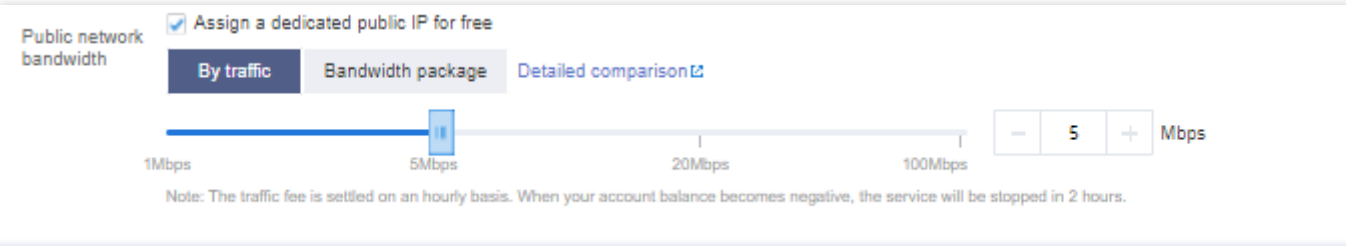
If you specify a cloud disk as the system disk, you can create a data disk using data disk snapshots:

Users with a large amount of data often use data disks to store data. You can create a snapshot for data disk A, and use this snapshot to quickly clone multiple disks for rapid server deployment.

When a new CVM instance is automatically added for Auto Scaling, if you've specified a snapshot for the data disk in the launch configuration, CBS automatically mounts a data disk to the launched CVM instance to copy data.

If a data disk snapshot is specified in the launch configuration, ensure that the data disk can be automatically mounted correctly so that the scaling group can be scaled out automatically. The snapshot of the data disk of the original instance should be taken before auto scaling is configured so that data disks can be automatically mounted when new CVM instances are activated. For more information, see Attaching Cloud Disks.

3. An independent public IP address is allocated by default at no charge. Please select a network billing method based on your actual needs.

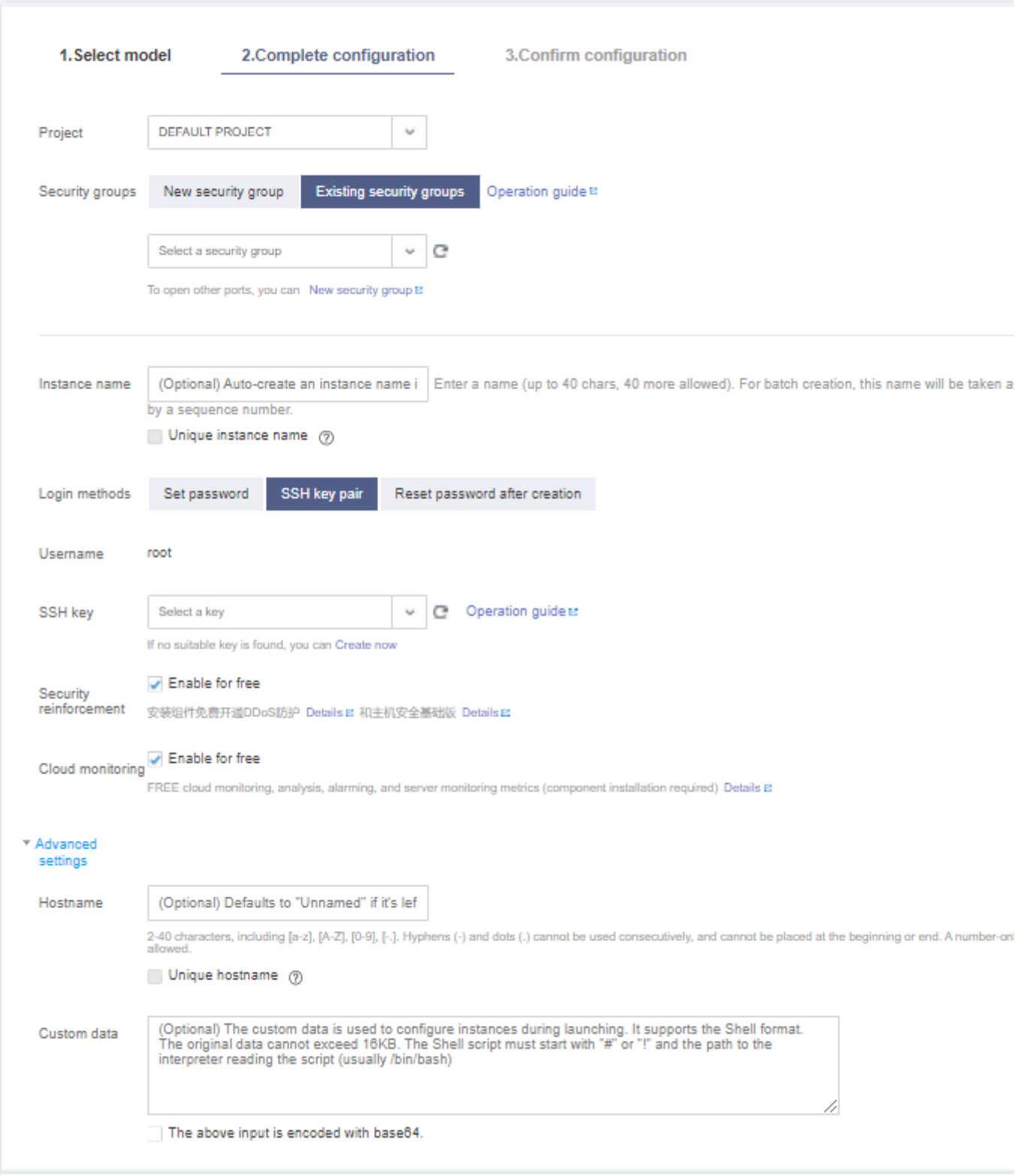


Note:

Auto Scaling is free of charge, but the added CVM instances, disks, and networks are billed in pay-as-you-go mode. Prices will be shown based on your configurations.

Setting information

1. In the **Configure the CVM** step, select the login method and security group. By default, CVM instances created by Auto Scaling are protected by Cloud Security and Cloud Monitor free of charge.



2. After configuration confirmation and successful creation, you can view created launch configurations on the **Launch Configuration** page.

ID/Name	Validity	Bound scaling group	Instance configuration	Instance billing mode	Bandwidth/network billing mode	System disk/Data disk	Image
	Valid	0	IT5.8XLARGE128 (32 core 128GB)	Pay-as-you-go	5 Mbps Bill by traffic	System disk: SSD cloud disks 50GB	

Step 2:Creating a Scaling Group

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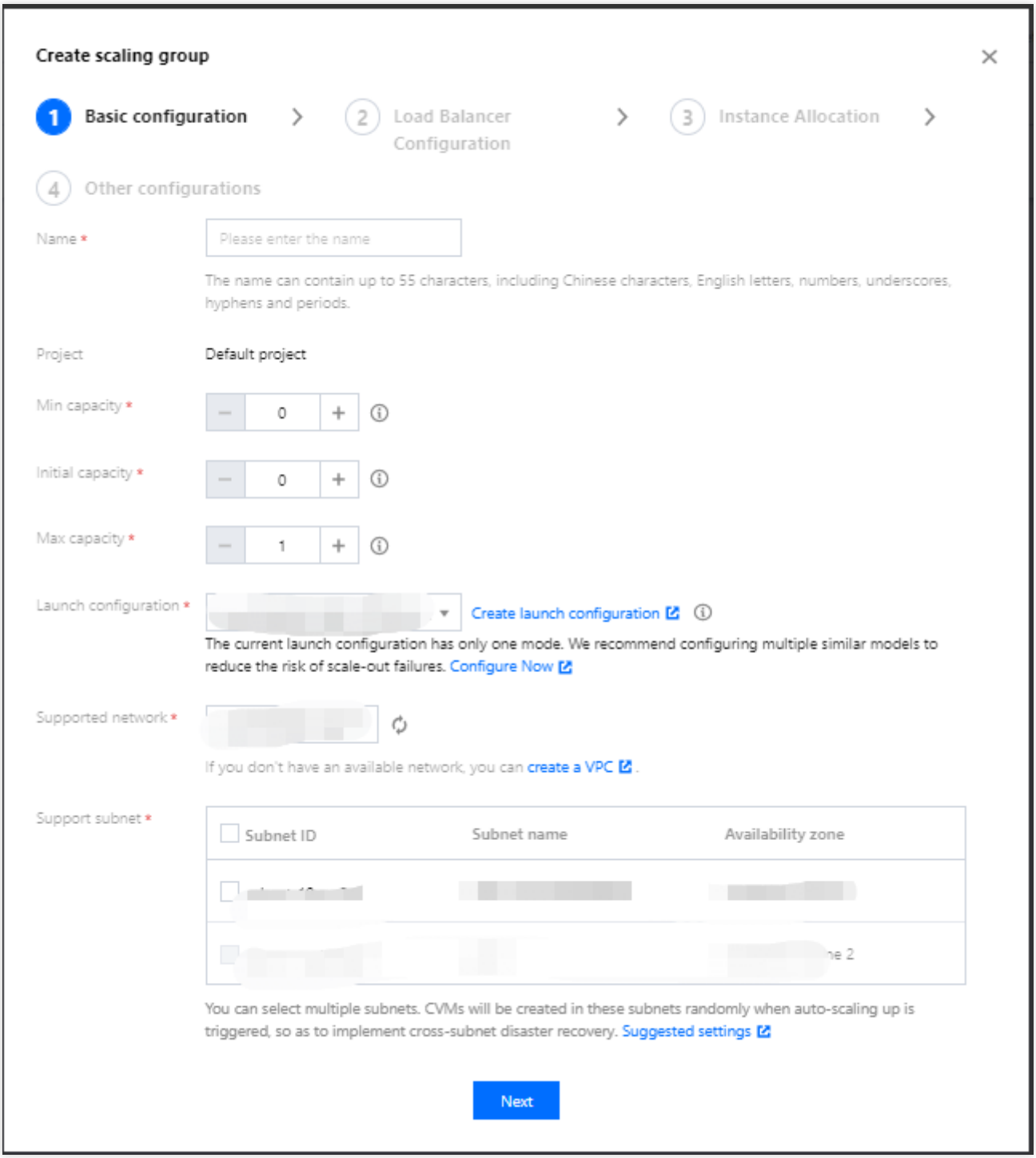
Overview

A scaling group contains a collection of CVM instances that follow the same rules and have a shared purpose. This document introduces how to create a scaling group in the Auto Scaling console.

Directions

Creating a scaling group

1. Log in to the Auto Scaling console and click **Scaling group** in the left sidebar.
2. On the **Scaling groups** management page, click **Create**.
3. On the **Create scaling group** page that pops up, enter the basic information of the scaling group (fields marked with * are required).



Name: Set the name of the scaling group.

Min capacity: The minimum number of instances allowed in a scaling group.

Initial capacity: The number of instances when the scaling group is created.

Max capacity: The maximum number of instances allowed in a scaling group.

Note:

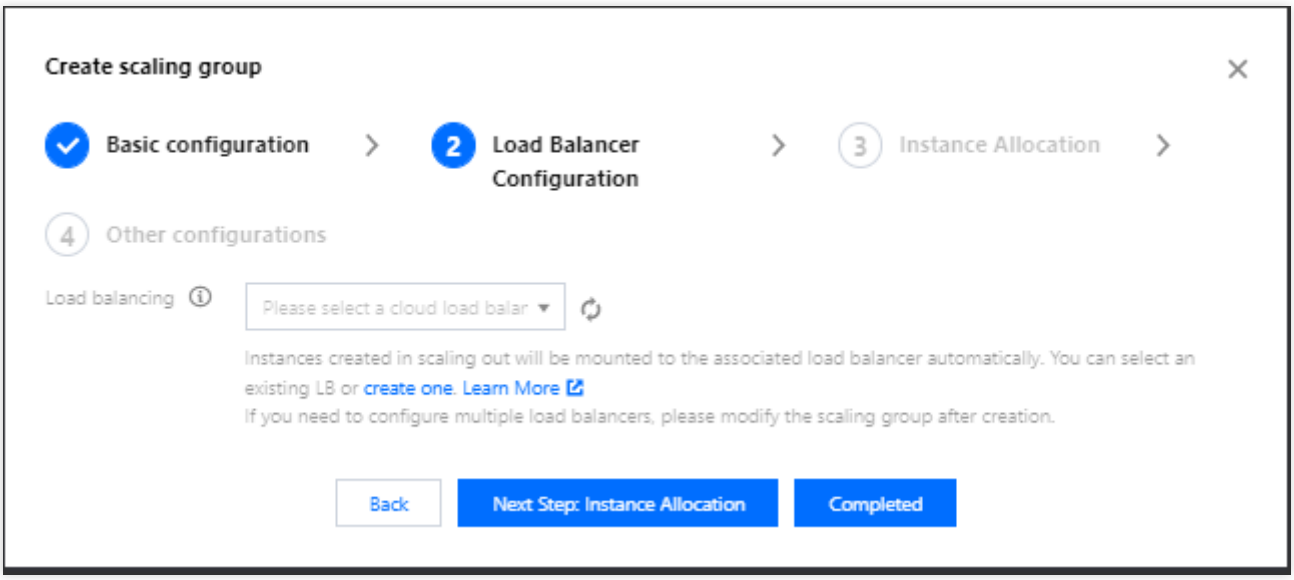
The current number of CVM instances in the scaling group will be maintained between the minimum and the maximum scaling group capacities.

Launch configuration: Specifies the launch configuration to scale out CVM instances.

Supported networks and availability zones: Select networks and availability zones based on your needs.

4. Click **Next**.

5. (Optional) In the **Load balancer configuration**, associate an existing load balancing policy or create a CLB, and click **Next step: Instance allocation**.

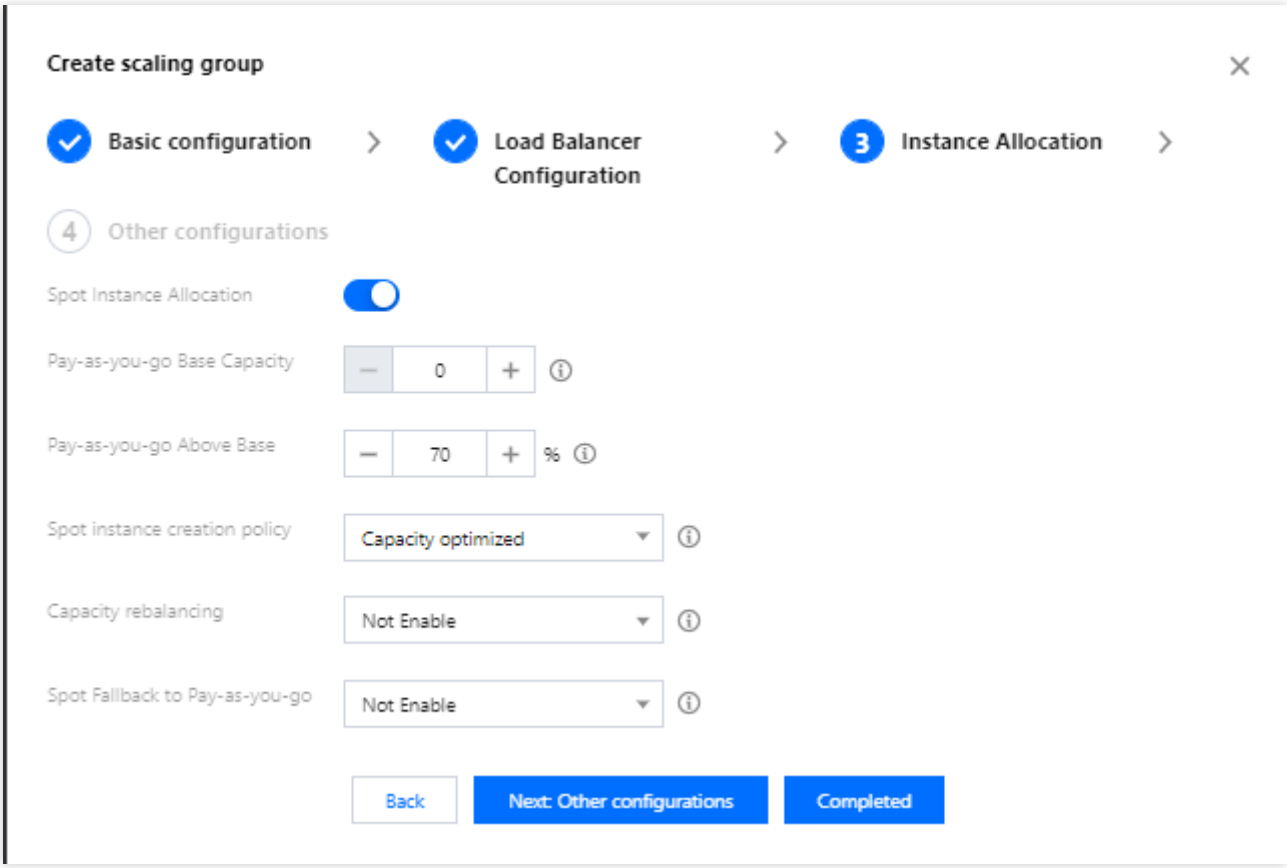


6. (Optional) In **Instance allocation**, configure the spot instance allocation policy. You can also click **Next step: Instance allocation** to skip this step.

Note:

Only when you specify that the billing mode of the launch configuration is pay-as-you-go, you can create a scaling group with both pay-as-you-go and spot instances.

Enable **Spot instance allocation**.



Pay-as-you-go base capacity: The minimum number of required pay-as-you-go instances in a scaling group. These instances have higher priority in auto scaling.

Pay-as-you-go above base: Controls the percentage of pay-as-you-go instances for the additional capacity beyond the base capacity. Valid range: 0-100

Spot instance creation policy: The policies for spot instance creation in a multiple-model lunch configuration.

Capacity optimized: First selects the most available spot instance model to make the best use of spot instance resources.

Lowest price: First launches spot instances at the lowest core price among the specified availability zones to minimize costs.

Capacity rebalancing: Enable it to replace a spot instance before it's terminated, thus maintaining the capacity and pay-as-you-go percentage of the scaling group.

Spot fallback to pay-as-you-go: Enable it to create pay-as-you-go instances when spot instances of the configured models are out of stock.

7. In the “Other configurations” step, refer to the following information to set the removal policy and instance creation policy.

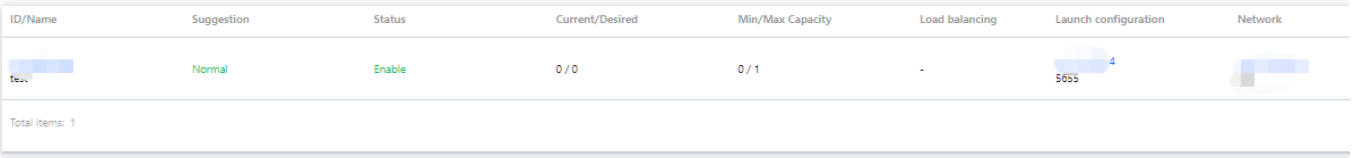
Removal policy: When the scaling group wants to reduce the number of instances and has multiple choices, it determines which instances to remove according to the removal policy. The options **Remove the oldest instance** and **Remove the latest instance** are supported.

Instance creation policy:

Preferred availability zones (subnets) first: Based on the sequence of availability zones (subnets) configured, the system first selects configuration items higher in the sequence. If a failure occurs, the system automatically retries in sequence. This mode is suitable for scenarios with one primary availability zone and other secondary availability zones.

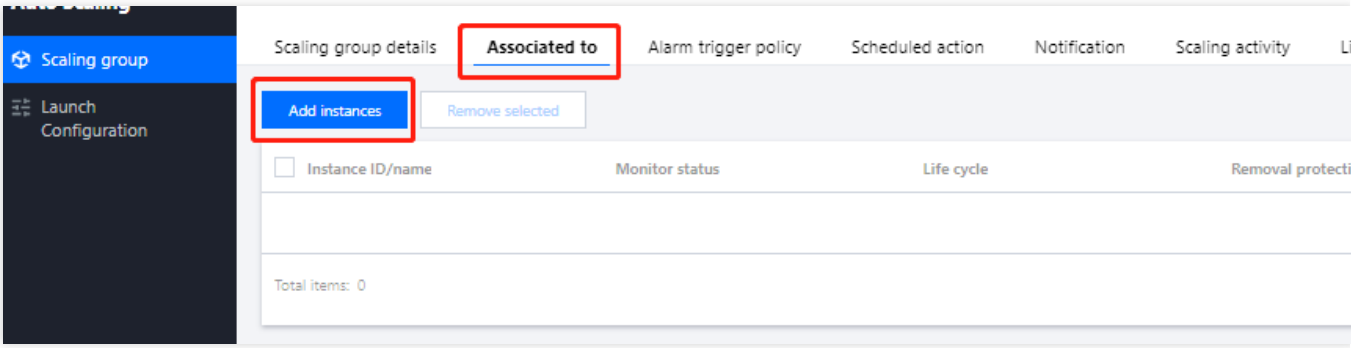
Multiple availability zones (subnets) distribution: During scale-out, the system will select availability zones (subnets) with relatively few instances in which to create new instances. This mode is suitable for architectures where instances need to be evenly distributed.

8. Click **Completed**. You can view the created scaling groups on the **Scaling groups** page.



Adding instances (optional)

1. Go to the **Scaling group** page and select the ID of the target scaling group to enter its details page.
2. Select the **Associated to** tab, click **Add instances**.



3. In the **Add instances** window that pops up, select the instance to be bound and click **OK**.

Note:

If you cannot add or remove a CVM instance to or from the list, check the maximum and minimum capacity values specified for the scaling group.

Step 3:Creating a Scaling Policy

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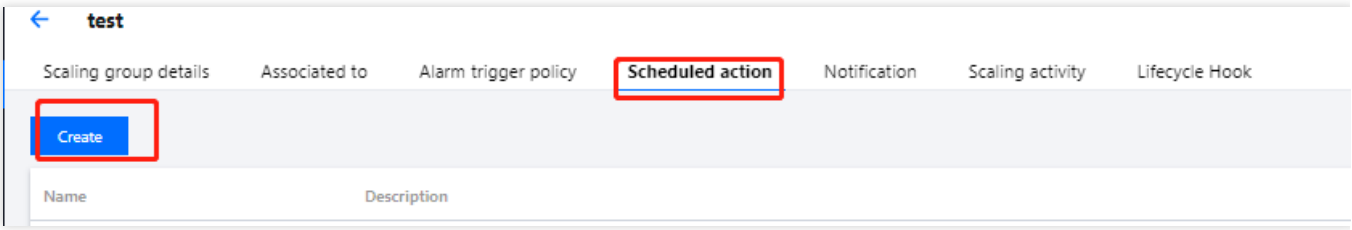
Overview

You can use scaling policies to increase or decrease the number of CVM instances in your scaling group:
Create a **scheduled action** to perform scheduled scaling, which can be set to run periodically.
Create an **alarm-triggered policy** to perform scaling based on Cloud Monitor metrics (such as CPU utilization and memory usage).

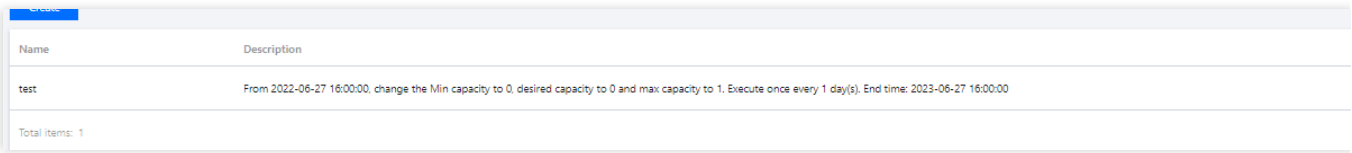
Directions

Creating a scheduled action

If your load changes are predictable, you can set scheduled actions to plan your scaling activities. This feature can automatically increase or decrease CVM instances according to a schedule. This allows you to flexibly cope with traffic load changes and improve device utilization while reducing deployment and instance costs.
1. Go to the **Scaling group** page and select the ID of the target scaling group to enter its details page.
2. Select the **Scheduled action** tab, and click **Create**.



3. In the **Create scheduled action** window that pops up, specify the action name, scaling group activities, repeat cycle, and other information.
4. After completing the configuration, click **OK** to view the scheduled action.



Creating an alarm policy

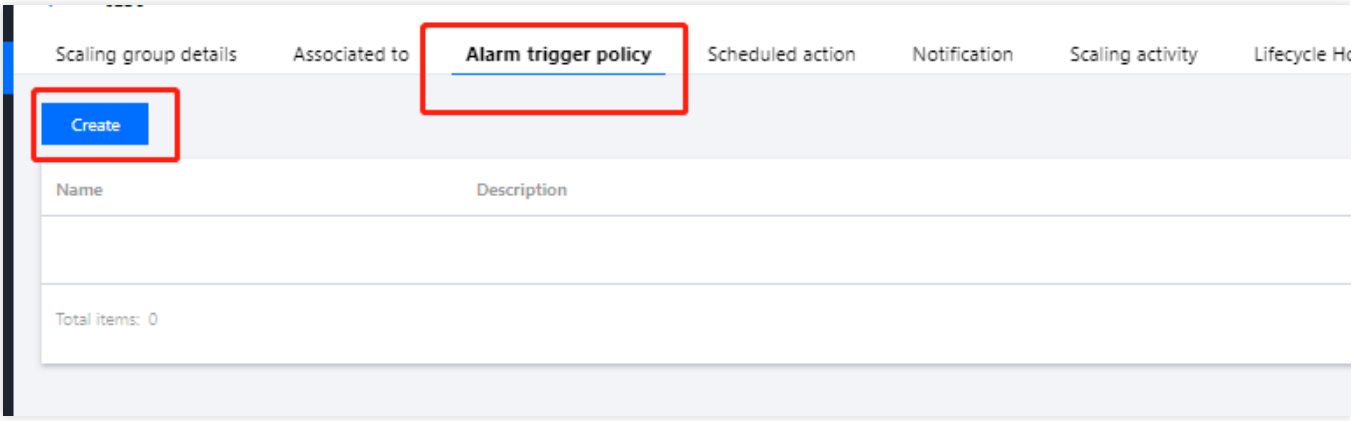
If you want to perform scaling based on CVM metrics, you can create an alarm policy to plan device scaling. This policy helps you automatically increase or decrease the number of instances in your scaling group to flexibly handle business load changes, increase device utilization, and reduce deployment and instance costs.

Note:

When a scaling group is created, a ping unreachable alarm-triggered policy is created by default, which is used to replace unhealthy CVMs.

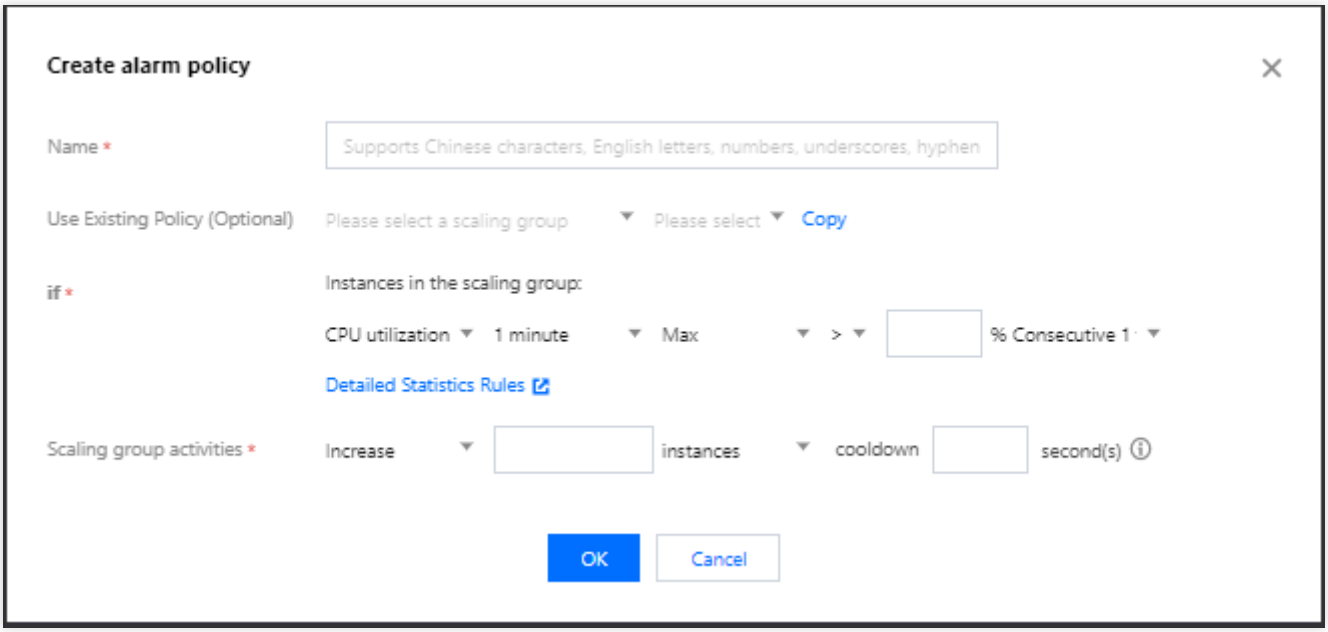
Before using an alarm policy, you need to install the latest version of Cloud Monitor Agent in the CVM image. For more information, see Installing Monitor Components.

1. Go to the **Scaling group** page and select the ID of the target scaling group to enter its details page.
2. Select the **Alarm-triggered policy** tab, and click **Create**.



3. In the **Create alarm policy** window that pops up, configure the Cloud Monitor metrics (such as CPU utilization, memory usage, and bandwidth), which will be used as the basis of adding or removing CVM instances by a specified number or percentage.

You can also choose **Use existing policy (optional)** to copy an existing policy from an existing scaling group to the current scaling group.



4. After completing the configuration, click **OK** to view the alarm-triggered policy.